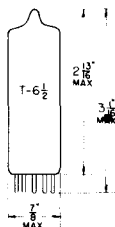


TUNG-SOL

PENTODE



GLASS BULB

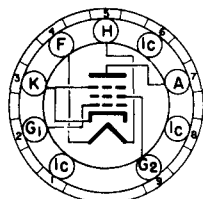
COATED UNIPOTENTIAL CATHODE.

HEATER

8.0±0.7 VOLTS 0.60 AMP.

AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW

SMALL BUTTON
9 PIN BASE

9CV

THE 88Q5 IS AN OUTPUT PENTODE DESIGNED FOR USE IN MEDIUM POWER HI-FI AMPLIFIERS.

DIRECT INTERELECTRODE CAPACITANCES

GRID #1 TO ALL ELEMENTS EXCEPT PLATE	10.8	$\mu\mu\text{f}$
PLATE TO ALL OTHER ELEMENTS EXCEPT GRID #1	6.5	$\mu\mu\text{f}$
PLATE TO GRID #1	0.5	$\mu\mu\text{f}$
GRID #1 TO HEATER	0.25	$\mu\mu\text{f}$

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

HEATER VOLTAGE	8.0±0.7	VOLTS
MAXIMUM PLATE VOLTAGE	300	VOLTS
MAXIMUM PLATE DISSIPATION	12	WATTS
MAXIMUM GRID #2 VOLTAGE	300	VOLTS
MAXIMUM GRID #2 DISSIPATION (ZERO SIGNAL)	2.0	WATTS
MAXIMUM GRID #2 DISSIPATION (MAX. SIGNAL)	4.0	WATTS
MAXIMUM CATHODE CURRENT	65	MA.
MAXIMUM GRID RESISTANCE (CATHODE BIAS)	1.0	MΩ
MAXIMUM GRID RESISTANCE (FIXED BIAS)	300	KΩ
MAXIMUM FILAMENT TO CATHODE VOLTAGE	100	VOLTS

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

PLATE VOLTAGE	250	VOLTS
GRID #2 VOLTAGE	250	VOLTS
PLATE CURRENT	48	MA.
GRID #2 CURRENT	5.5	MA.
GRID #1 VOLTAGE	-7.3	VOLTS
TRANSCONDUCTANCE	11 300	μMHOS
PLATE RESISTANCE	40	KΩ
AMPLIFICATION FACTOR (GRID #1 TO GRID #2)	19.5	

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TUNG-SOL

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TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS - CONT'D.**CLASS A - ONE TUBE**

HEATER VOLTAGE	8.0	8.0	8.0	8.0	VOLTS
HEATER CURRENT	0.60	0.60	0.60	0.60	AMP.
PLATE VOLTAGE	250	250	250	250	VOLTS
SCREEN GRID VOLTAGE	250	250	250	210	VOLTS
PLATE LOAD RESISTANCE	5.2	4.5	7.0	7.0	k Ω
CATHODE RESISTANCE	135	135	210	160	Ω
GRID #1 VOLTAGE	-7.3	-7.3	-8.4	-6.4	VOLTS
PLATE CURRENT (ZERO SIGNAL)	48	48	36	36	MA.
PLATE CURRENT (MAX. SIGNAL)	49.5	50.6	36.8	36.6	MA.
GRID #2 CURRENT (ZERO SIGNAL)	5.5	5.5	4.1	3.9	MA.
GRID #2 CURRENT (MAX. SIGNAL)	10.8	10.0	8.5	7.3	MA.
INPUT (RMS) SIGNAL VOLTAGE	4.3	4.4	3.5	3.4	VOLTS
POWER OUTPUT	5.7	5.7	4.2	4.3	WATTS
TOTAL DISTORTION (MEASURED WITH FIXED GRID BIAS)	10	10	10	10	PERCENT

CLASS AB - TWO TUBES, PUSH-PULL

PLATE VOLTAGE	250	300	VOLTS
GRID #2 VOLTAGE	250	300	VOLTS
COMMON CATHODE RESISTANCE	130	130	Ω
PLATE TO PLATE LOAD RESISTANCE	8.0	8.0	k Ω
PLATE CURRENT (ZERO SIGNAL)	2x31	2x36	MA.
PLATE CURRENT (MAX. SIGNAL)	2x37.5	2x46	MA.
GRID #2 CURRENT (ZERO SIGNAL)	2x3.5	2x4.0	MA.
GRID #2 CURRENT (MAX. SIGNAL)	2x7.5	2x11	MA.
INPUT SIGNAL VOLTAGE (RMS)	8	10	VOLTS
POWER OUTPUT	11	17	WATTS
PERCENT DISTORTION	3.0	4.0	PERCENT

CLASS B - TWO TUBES, PUSH-PULL

PLATE VOLTAGE	250	300	VOLTS
GRID #2 VOLTAGE	250	300	VOLTS
GRID #1 VOLTAGE	-11.6	-14.7	VOLTS
PLATE TO PLATE LOAD RESISTANCE	8.0	8.0	k Ω
PLATE CURRENT (ZERO SIGNAL)	2x10	2x7.5	MA.
PLATE CURRENT (MAX. SIGNAL)	2x37.5	2x46	MA.
GRID #2 CURRENT (ZERO SIGNAL)	2x1.1	2x0.8	MA.
GRID #2 CURRENT (MAX. SIGNAL)	2x7.5	2x11	MA.
INPUT SIGNAL VOLTAGE (RMS)	8	10	VOLTS
POWER OUTPUT	11	17	WATTS
PERCENT DISTORTION	3.0	4.0	PERCENT

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TUNG-SOL -

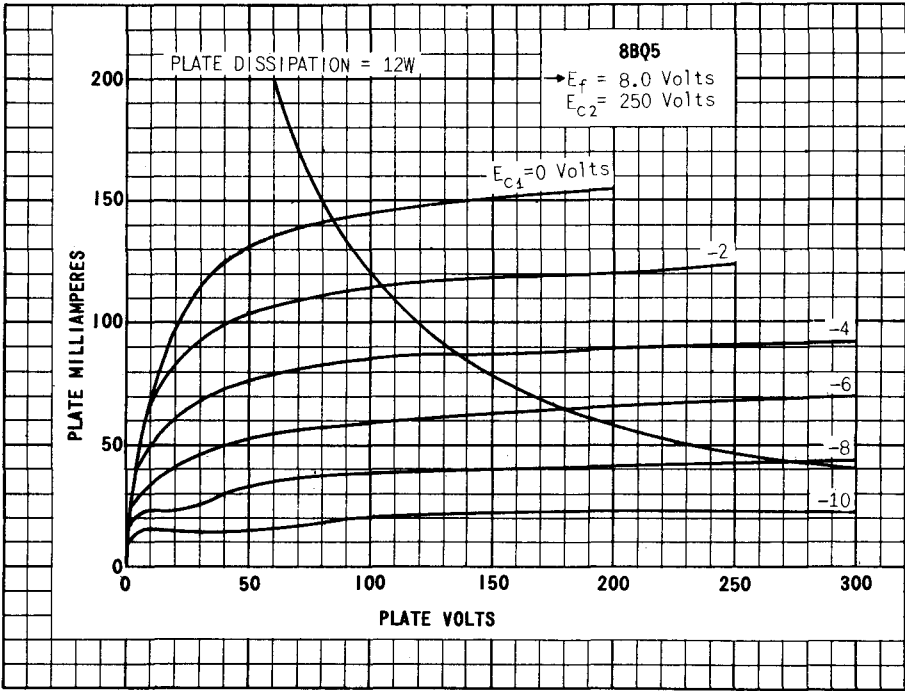
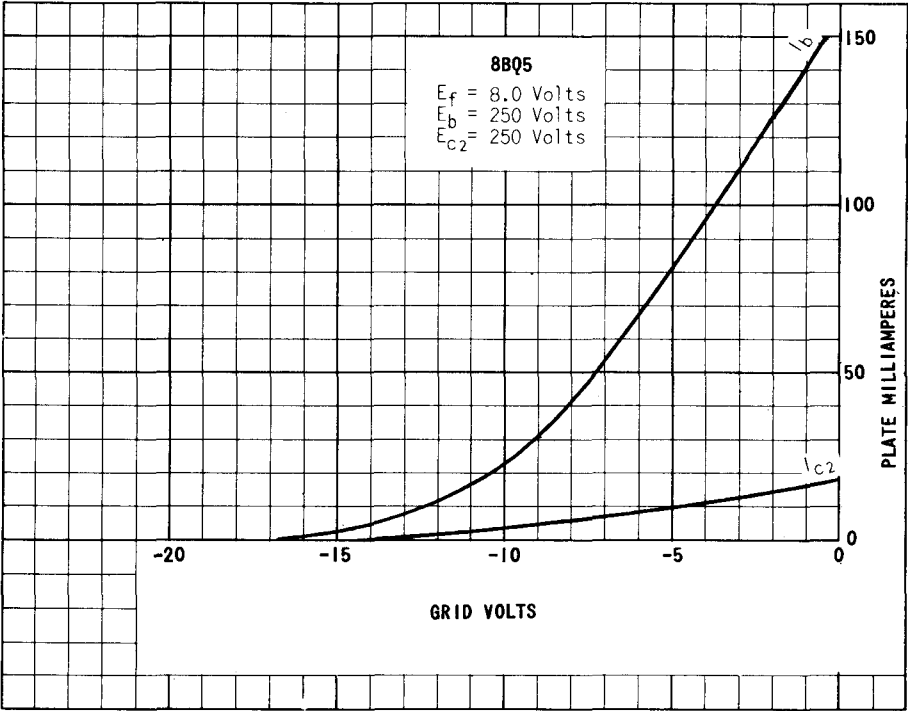
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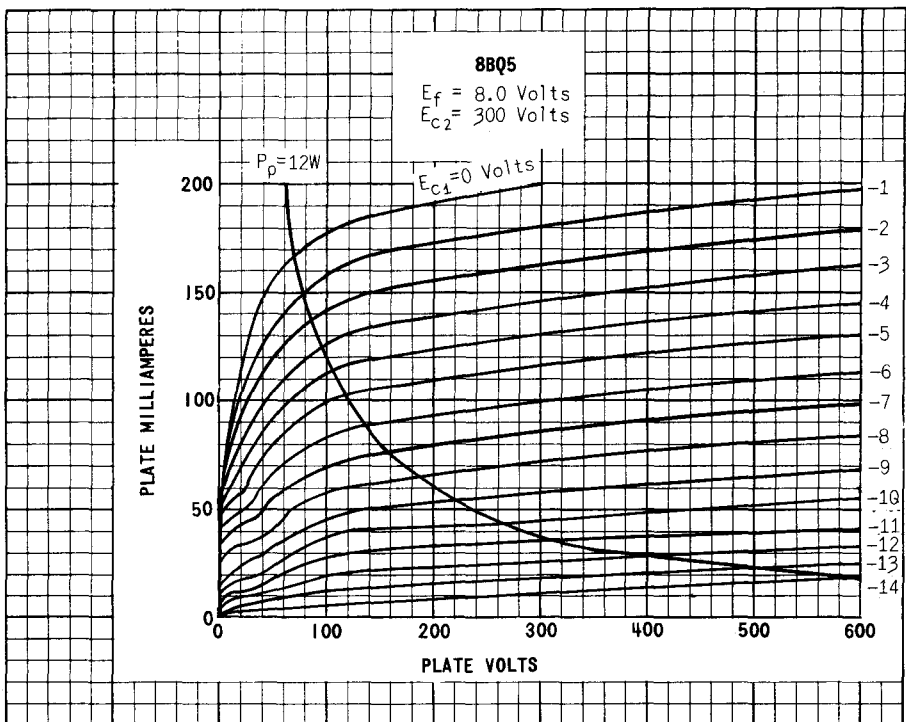
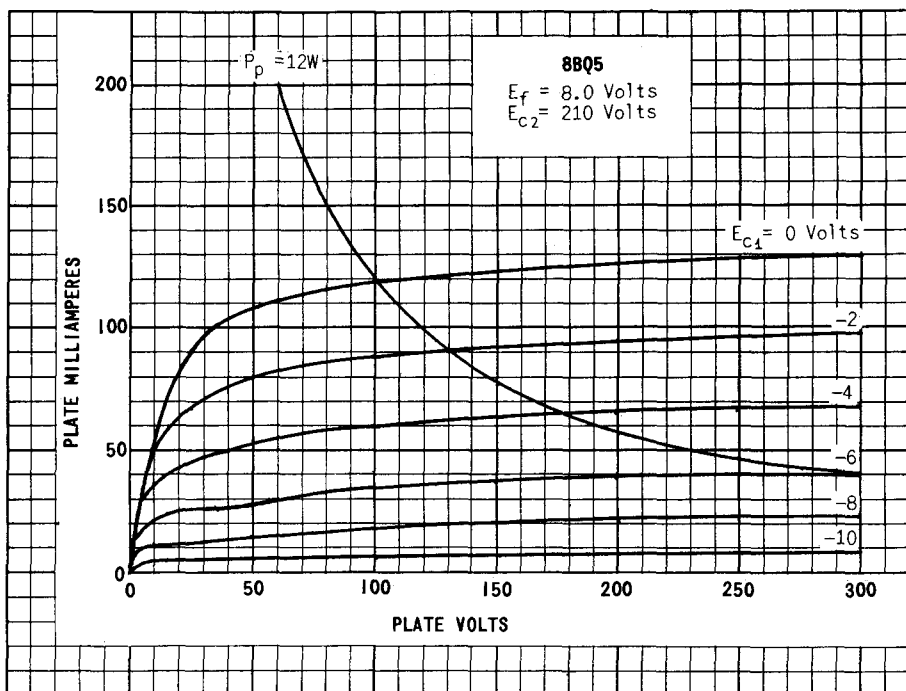
CLASS A - TRIODE OPERATION
SCREEN GRID CONNECTED TO PLATE

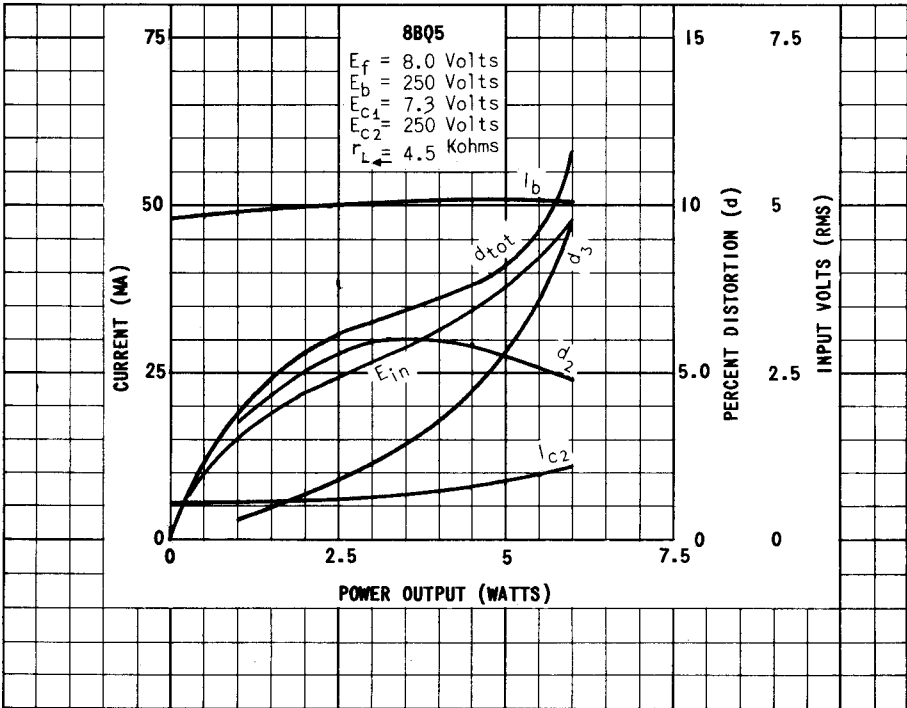
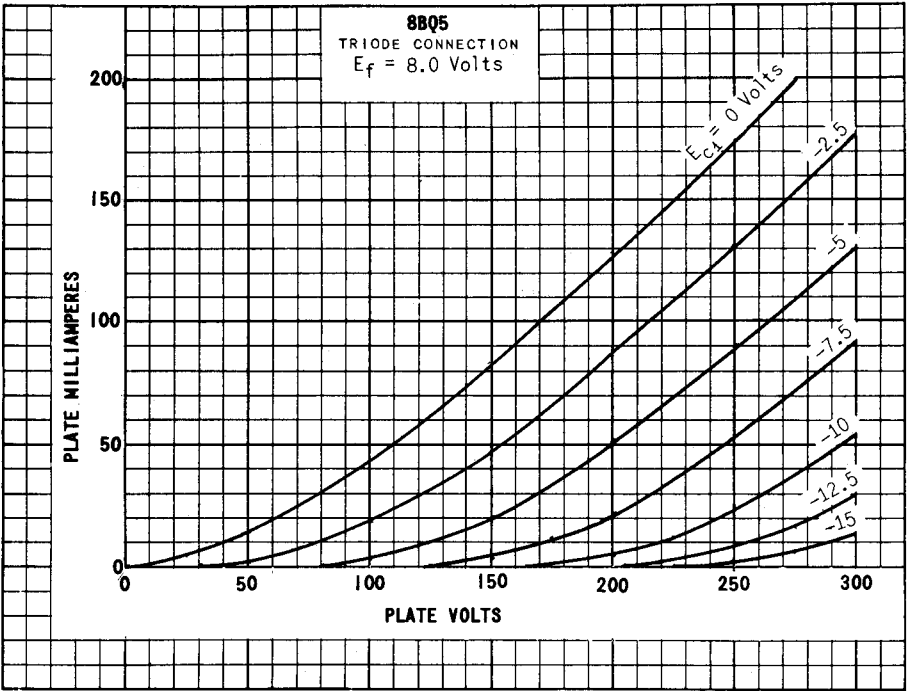
PLATE VOLTAGE	250	VOLTS
COMMON CATHODE RESISTANCE	270	Ω
PLATE LOAD RESISTANCE	3.5	k Ω
PLATE CURRENT (ZERO SIGNAL)	34	MA.
PLATE CURRENT (MAX. SIGNAL)	36	MA.
INPUT SIGNAL VOLTAGE (RMS)	6.7	VOLTS
POWER OUTPUT	1.95	WATTS
PERCENT DISTORTION	9.0	PERCENT

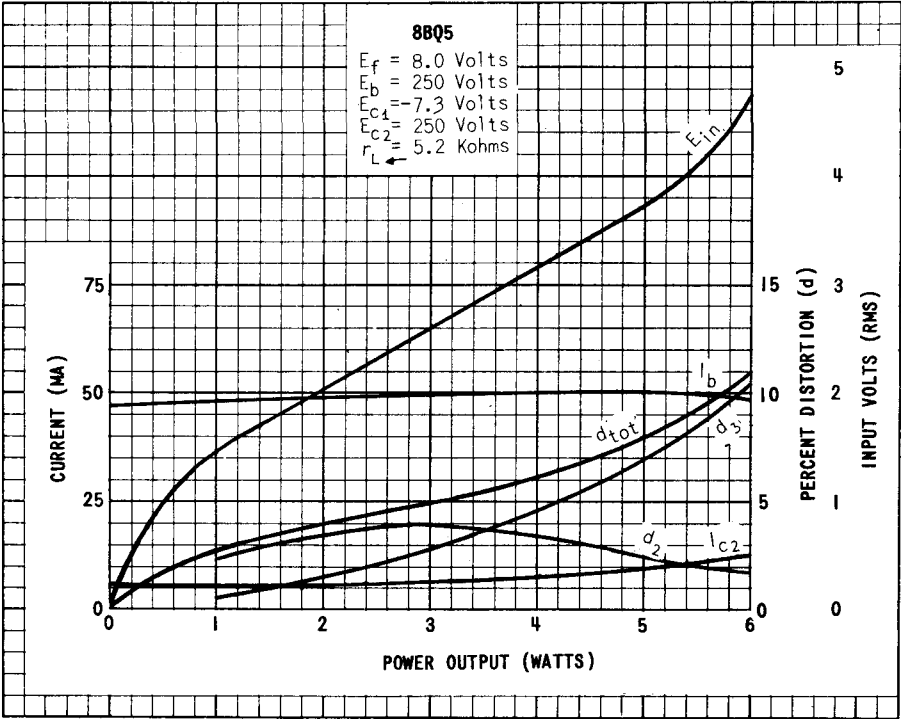
CLASS AB - TRIODE OPERATION
TWO TUBES, PUSH-PULL. SCREEN GRID CONNECTED TO PLATE

PLATE VOLTAGE	250	300	VOLTS
COMMON CATHODE RESISTANCE	270	270	Ω
PLATE TO PLATE LOAD RESISTANCE	10	10	k Ω
PLATE CURRENT (ZERO SIGNAL)	2x20	2x24	MA.
PLATE CURRENT (MAX. SIGNAL)	2x21.7	2x26.0	MA.
INPUT SIGNAL VOLTAGE (RMS)	8.3	10	VOLTS
POWER OUTPUT	3.4	5.2	WATTS
PERCENT DISTORTION	2.5	2.5	PERCENT

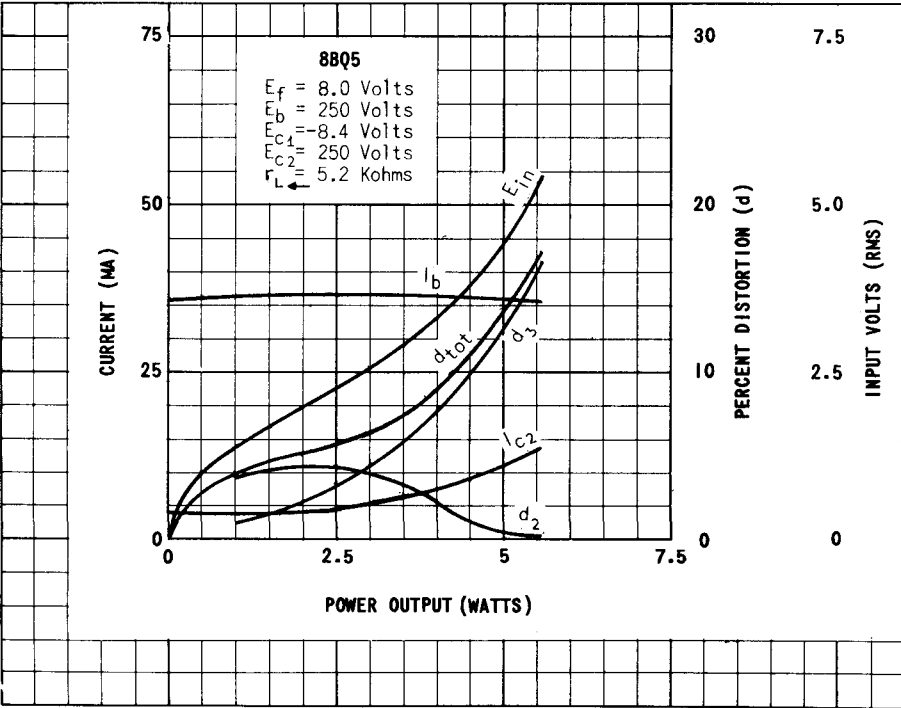


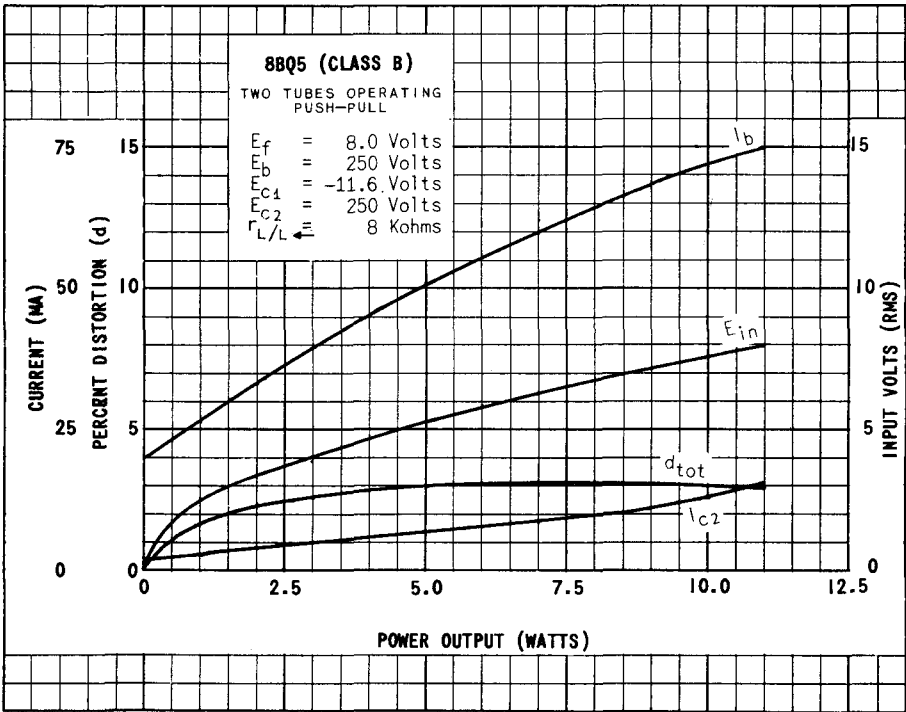
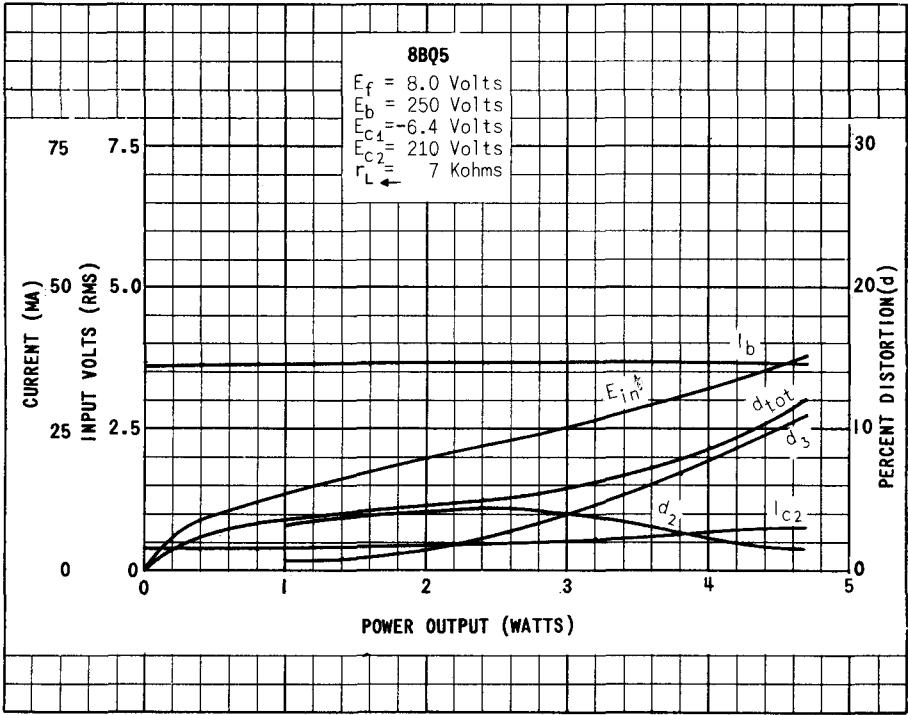


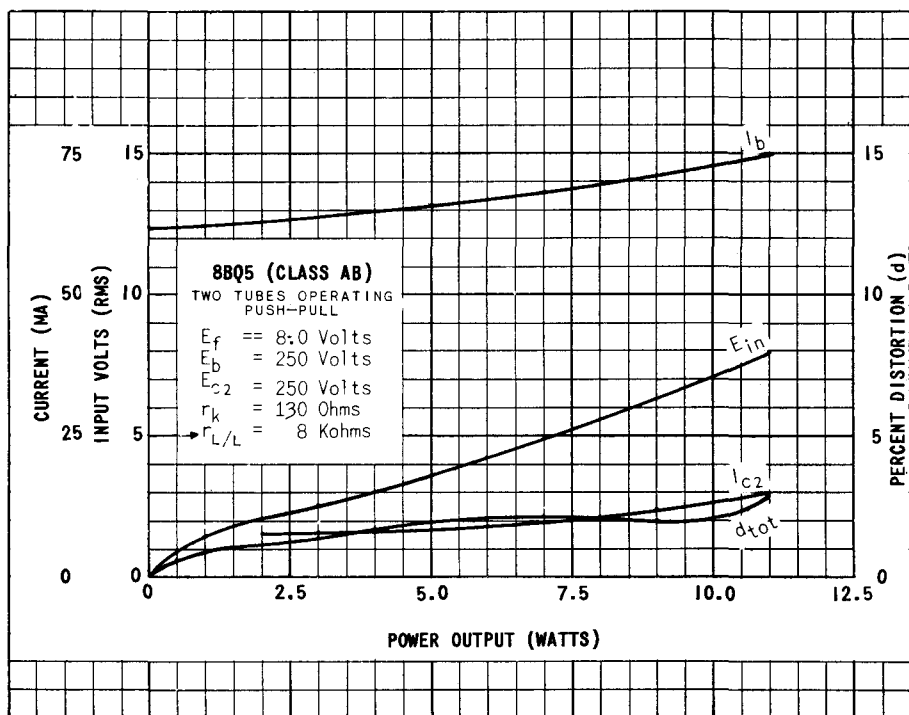
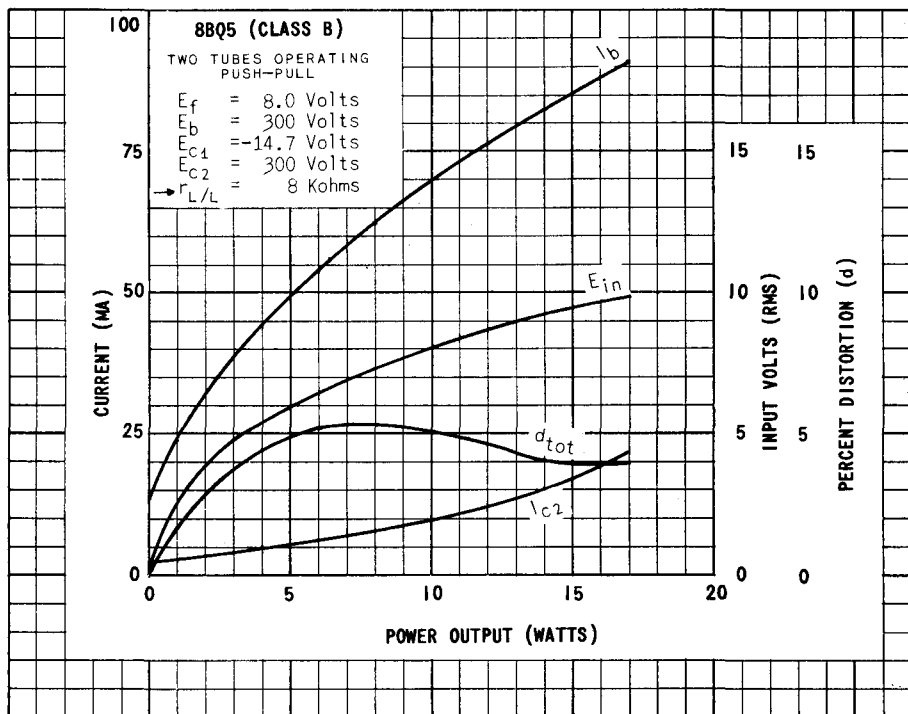


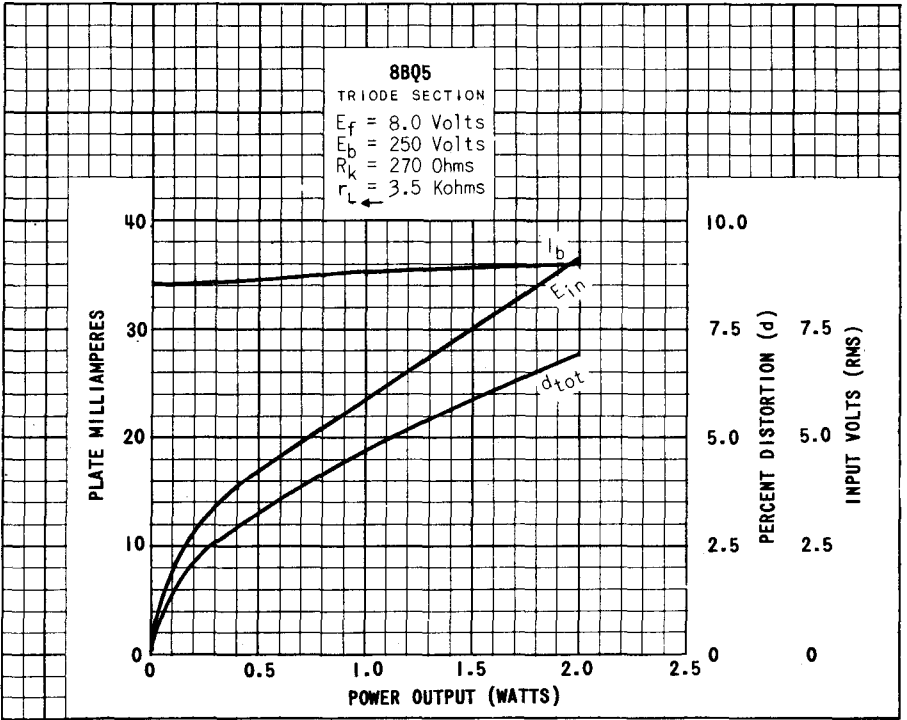
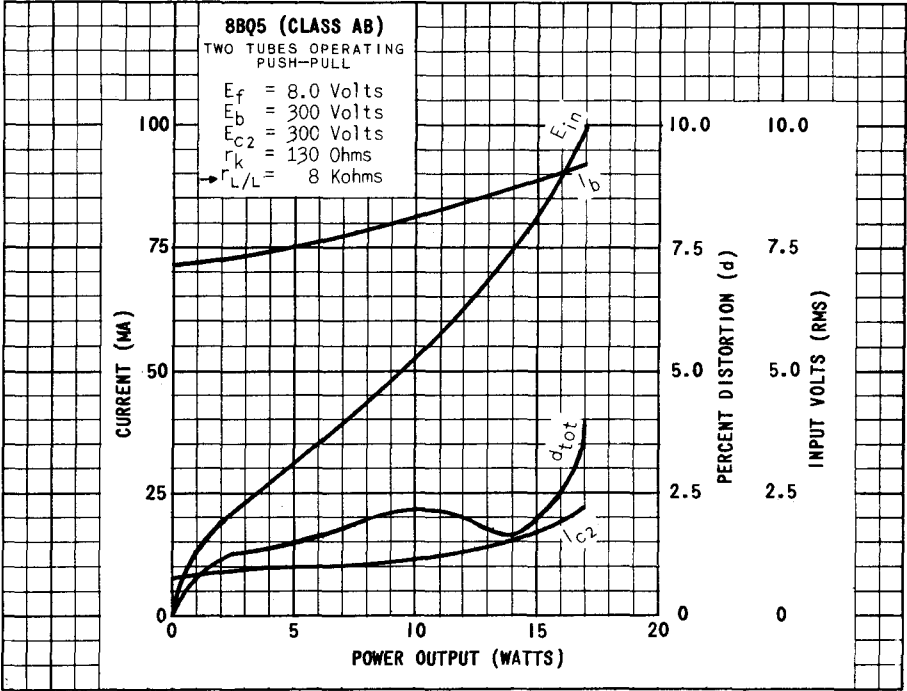


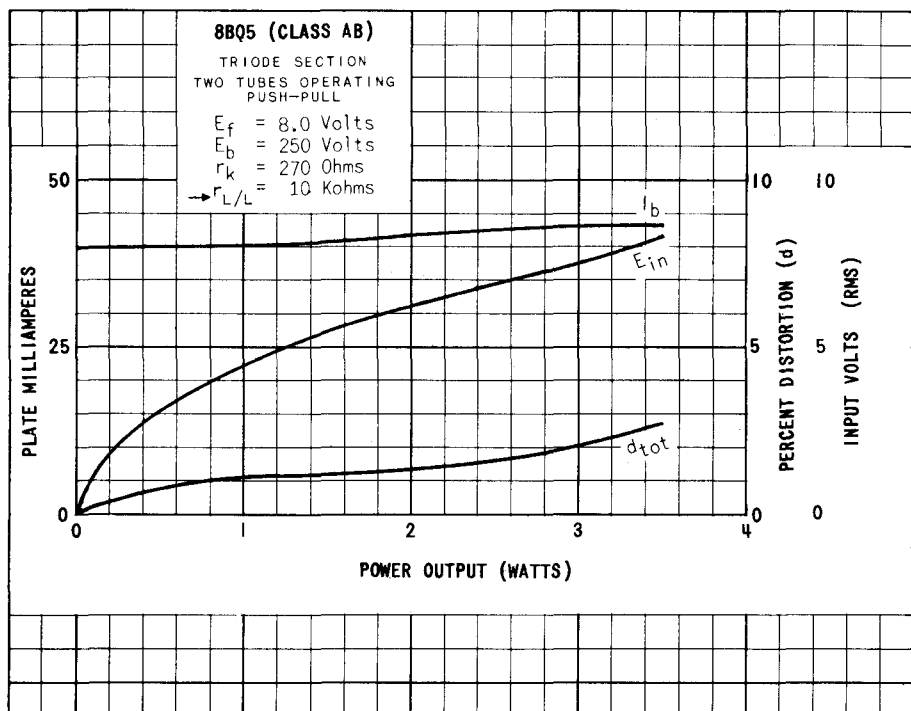
→ INDICATES A CHANGE.











$\rightarrow$ INDICATES A CHANGE.

